



# Ready-to-Use vs. Dilutable Disinfectants for Terminal Cleaning

## Introduction

Dilutable disinfectants are commonly used for terminal cleaning in North American hospitals. Although the price tag associated with dilutable disinfectants may seem appealing, hidden costs arising from cross-contamination, quality control issues and low compliance have all been associated with dilutable product use.<sup>1</sup> Non-compliance and cross-contamination in particular are thought to contribute to hospital-acquired infections (HAIs),<sup>2</sup> which have been estimated to cost U.S. hospitals an average of \$9.8 billion per year for the five most prevalent HAIs,<sup>3,4</sup> and up to \$45 billion in overall annual direct medical costs for all HAIs.<sup>5</sup> Swapping out dilutable towel and bucket products for ready-to-use cleaners and disinfectants may help hospitals achieve consistent, compliant use for terminal hard surface disinfection.

## What are some of the hidden costs associated with dilutable disinfectants?

### Cross-Contamination

Dilutable products are typically concentrated quaternary ammonium-based liquids that require automated dilution with water and the use of a cloth, mop or sponge to apply. Reusable cotton and microfiber cleaning towels, which are commonly used with dilutable disinfectants, have been shown to harbour viable microorganisms even after laundering, contributing to cross-contamination.<sup>6</sup>

### Compliance

In a recent publication on how to select the ideal disinfectant, Dr. William Rutala, a leader in infection-prevention research, cites the “cost per compliant use” as a key consideration when evaluating potential products. Another study comparing ready-to-use disinfectants with the traditional towel-and-bucket method found significantly higher compliance with ready-to-use products, suggesting that ready-to-use may be the preferred method for terminal cleaning.<sup>1</sup> This same study reported observed compliance issues with dilutable disinfectants, including improper dilution, rag reuse, rag double dipping and inadequate rag saturation, all of which have been linked to higher *C. difficile* incidence rates in U.S. hospitals.<sup>7</sup>

### Quality Control

Dilutable products require proper mixing and use to effectively disinfect hard surfaces.<sup>8</sup> Achieving consistent dilution and towel saturation leaves room for human error that can lead to quality control issues.<sup>1</sup> Dilution systems also require regular maintenance and testing to ensure proper performance, and environmental factors such as hard water can adversely affect the performance of dilutable systems.<sup>9</sup>

### Compatibility

Using cotton cloths with quaternary ammonium-based disinfectants, which are the most common type of dilutable product, may result in inadequate transfer of disinfectant to hospital surfaces.<sup>10</sup> Microfiber, which is the preferred vehicle for applying dilutable quaternary ammonium-based disinfectants, has variable performance after repeated washes.<sup>11</sup>

### Time

A recent study comparing ready-to-use products with traditional dilutable disinfectants for terminal cleaning found that employees spent an average of 3.8 minutes per patient room when using dilutable products, as compared to only 3.0 minutes when using ready-to-use disinfectants.<sup>1</sup> This translates to a cost savings of \$38.58 per employee per day when using ready-to-use products. The authors also reported significantly longer contact times with ready-to-use products when compared to the traditional towel-and-bucket method.

# Ready to throw in the towel? Consider ready-to-use Clorox Healthcare® products for consistent, compliant disinfection.

Ready-to-use disinfectants eliminate the need for laundering, reducing the chance of cross-contamination and minimizing employee time spent on disinfection procedures. Premoistened wipes enable consistent, compliant product application while also minimizing turnover time. Clorox Healthcare® offers a range of ready-to-use disinfectant products to help kill your toughest pathogens during everyday routine cleaning and terminal cleaning.

## Bleach-Based



### Clorox Healthcare® Professional Disinfecting Bleach Wipes

Health Canada DIN 02401983

#### PRODUCT INFORMATION

6.75" x 9" wipe size

Case UPC 100 55500 01308 8 6/70 ct.

Effective against 46 microorganisms in 1 minute & *C. diff* spores in 3 minutes



### Clorox Healthcare® Professional Disinfecting Bleach Wipes

Health Canada DIN 02401983

#### PRODUCT INFORMATION

12" x 12" wipe for Terminal Cleaning

Case UPC 100 55500 01309 5 2/110 ct.

Effective against 46 microorganisms in 1 minute & *C. diff* spores in 3 minutes



### Clorox Healthcare® Professional Disinfecting Bleach Wipes

Health Canada DIN 02401983

#### PRODUCT INFORMATION

12" x 12" wipe size - Refill

Case UPC 100 55500 01310 1 2/110 ct. Refill

Effective against 46 microorganisms in 1 minute & *C. diff* spores in 3 minutes



### Clorox Healthcare® Professional Disinfecting Bleach Cleaner

Health Canada DIN 02399156

#### PRODUCT INFORMATION

946 mL Bottle

Case UPC 100 55500 01416 0 6/946 mL

Effective against 36 microorganisms in 1 minute & *C. diff* spores in 5 minutes

#### References

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\*Use as directed on hard, nonporous surfaces.

For more information, contact your Clorox sales representative or call **1.866.789.4973**.  
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